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Intellectual Property Protection in Philippine Agriculture: a Developmental Perspective

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INTELLECTUAL PROPERTY PROTECTION IN PHILIPPINE AGRICULTURE: A DEVELOPMENTAL PERSPECTIVE[i]

By

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I. Introduction

This paper is premised on the debate on whether intellectual property protection furthers economic development in developing countries. One view is that more is better, arguing that intellectual property rights trigger research and technological advancement.[iii] The other view is that more means not better, but worse. Advocates of this view claim that developing countries, being "second comers" in a world where developed countries got a head start in development are confronted with rules imposed by the "first comers", intellectual property rules included, which are of course, designed by the latter to serve their interests.[iv]

A very recent literature on this debate is the September 2002 Report of the Commission on Intellectual Property Rights.[v] Although established under the auspices of the British Government, its purpose, composition, and resulting research output belie any contention that it is nothing but a mouthpiece of the British government. The purpose is relevantly global in scope – to review, on the basis of available evidence, the impact of intellectual property protection among developing countries.[vi] The Commissioners[vii], on the other hand, are world-renowned intellectual property experts from different parts of the world and whose integrity are beyond reproach. The resulting Report is remarkable because of the thoroughness of its findings. While many of such findings may not be

original, the Report is to be credited for coming up with a comprehensive collation of findings on the impact of intellectual property protection in developing countries. Thus, the significance to policy-makers in the realm of intellectual property in developing countries cannot be understated.

Due to the enormity of its research task, the Commission's research methodology is understandable. It gathered data by studies of representative countries – Brazil, China, India, Kenya, and South Africa,[viii] and supplemented by consultations with public sector officials, the private sector, and non-government agencies in London, Brussels, Geneva, and Washington, as well as by commissioning studies, organizing workshops, and conferences on intellectual property all over the world[ix].

This paper starts where the said Report ends. As it did not include a specific country study of Philippine intellectual property, there is a need for further research as to the relevance of its findings to the Philippines. Specifically, this paper focuses on the findings of the Report on agriculture and genetic resources. Using the said findings as springboards for discussion, the author comes up with recommendations as to how intellectual property protection could better serve Philippine developmental objectives.

II. The Findings of the Commission on Agriculture and Genetic Resources[x]

A. THE COMMISSION'S FINDINGS

There are three general conclusions which may be deduced from the Report with respect to agriculture and genetic resources. First, empirical data yields no, or at best inconclusive, evidence relating intellectual property protection to development in

developing countries.[xi] Second, there exists evidence that intellectual property protection has consequences that impede or may impede development.[xii] Third, for intellectual property protection to further development, it must "suit local palates".[xiii]

The above-mentioned first and second conclusions are questions of fact. For instance, as to intellectual property protection's impact on research, the Commission found that about one third of all agricultural research and development in the world is spent on developing countries, citing that in 1995, total expenditure by the public sector on agricultural research, although unevenly distributed, amounted to $11.5 billion (at 1993 international dollar values) compared to $10.2 billion spent on developing countries.[xiv] However, the Report cites no data linking such upsurge in research to tangible manifestations of development. Furthermore, the question of "Development for whom?" may be raised. In this regard, there is evidence to the effect that the subjects of such increased research are merely reflective of marketing demands in developed countries, as they involve matters which multinational corporations in developed countries could possibly derive sizable profits. [xv]

On the impact of plant variety protection, the Commission likewise found little evidence "of an increased range of plant material available to farmers or increased innovation as a result of plant variety protection".[xvi] It also found out that "access to foreign genetic material had improved, but its use was sometimes subject to restrictions, for example on exports",[xvii] and that "Poor farmers had not benefited directly from protection, but could potentially be adversely affected by restrictions on seed saving and exchange in the future."[xviii]

On the impact of patents on plant varieties granted in countries that allow it,[xix] namely, US, Japan, and Australia, the Report states that "whatever the incentives provided by patenting, market forces will tend to direct research efforts by the private sector to where there is most substantial potential return…For instance, rice, where the value of production in India alone exceeds that of the US maize market, has hitherto been a crop where breeding has been a preserve of the national or international public sector (principally the CGIAR). Since then, the private sector has become increasingly interested in rice research. Monsanto and Sygenta have worked on sequencing the rice genome of two major rice varieties. The number of patents relating to rice issued annually in the US has risen from less than 100 in 1995 to over 600 in 2000."[xx]

The Report further cites that aside from the problem of incentives for research relevant to poor farmers, there is evidence that patents, and to some extent plant variety protection, have immensely contributed to the major consolidation of the global seed and agricultural input industries.[xxi] However, the Report is likewise quick to note that "the speed of concentration in the sector raises competition issues. There are considerable dangers to food security if the technologies are overpriced to the exclusion of small farmers, or there is no alternative source of new technologies, particularly from the public sector. Further, the increase in concentration, and the conflicting patent claims when both the public and the private sectors have patented plant technologies, may have had an inhibiting effect on research. In the private sector, the response has been alliances or acquisitions, but a problem for the public sector is how to access the technologies they need to undertake research without infringing IP rights and, if they develop new technologies, the terms on which they may be made available. A recent review published

by the US Department of Agriculture concludes that "whether the current intellectual property regime is stimulating or hampering research is unclear.""[xxii]

Regarding access to plant genetic resources and farmers' rights, the Report recognizes that there is "an imbalance between the IP rights afforded to breeders of modern plant varieties and the rights of farmers who were responsible for supplying the plant genetic resources from which such varieties were mainly derived".[xxiii] Secondly, it cites the concern on the consistency between making available plant genetic resources as the common heritage of mankind and the granting of private intellectual property rights on varieties derived therefrom.[xxiv]

B. THE COMMISSION'S RECOMMENDATIONS

As earlier discussed, a third conclusion which may be inferred from the Report is that intellectual property protection may well serve developmental objectives if "suited to local palates". With this in view, the Commission came up with the following recommendations.

1. Recommendations Relating to Intellectual Property Protection[xxv]

The Commission's recommendations on this matter concern primarily with developing countries' compliance with the Agreement on Trade-Related Aspects of Intellectual Property (TRIPS), discussed extensively later.

The Commission proposes that compliance with the provision on the adoption of a *sui generis* system that would protect plant varieties should be carefully made with due regard to a country's particular agricultural and socio-economic circumstances. It was pointed out that such regimes "should permit access to the protected varieties for further research and breeding, and provide at least for the right of farmers to save and plant-back seed, including the possibility of informal sale and exchange."[xxvi]

The Commission also recommends the following:

> "*Developing countries should generally not provide patent protection for plants and animals, as is allowed under Article 27.3 (b) of TRIPS, because of the restrictions patents may place on use of seed by farmers and researchers.*
>
> *"Those developing countries with limited technological capacity should restrict the application of patenting in agricultural biotechnology consistent with TRIPS, and they should adopt a restrictive definition of the term "microorganism".*
>
> "*Countries that have, or wish to develop, biotechnology-related industries may wish to provide types of patent protection in this area. If they do so, specific exceptions to the exclusive rights, for plant breeding and research, should be established. The extent to which patent rights extend to the progeny or multiplied product of the patented invention should also be examined and a clear exception provided for farmers to reuse seeds.*
>
> *xxx xxx xxx*
>
> *Because of growing concentration in the seed industry, public sector research on agriculture, and its international component, should be strengthened and better funded. The objective should be to ensure that research is oriented to the needs of the poor farmers; that public sector varieties are available to provide competition for private sector varieties; and that the world's plant genetic resource heritage is maintained. In*

addition, this is an area in which nations should consider the use of competition law to respond to the high level of concentration in the private sector".

2. Recommendations Relating to Access To Plant Genetic Resources [xxvii]

In this regard, the Commission recommends the acceleration of the ratification of the FAO International Treaty on Plant Genetic Resources for Food and Agriculture and should, in particular, implement the Treaty's provisions relating to:

"Not granting IPR protection of any material transferred in the framework of the multilateral system, in the form received.

"Implementation of Farmers' Rights at the national level, including (a) protection of traditional knowledge relevant to genetic resources for food and agriculture; (b) the right to equitably participate in sharing benefits arising from the utilization of plant genetic resources for food and agriculture; (c) the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture."[xxviii]

III. Philippine Agriculture and Development

A. OVERVIEW

The Philippines is an archipelago in Southeast Asia composed of 7,107 islands and with a total land area of 300,000 square meters.[xxix] About 32% or 9.73 million hectares out of the aforementioned total area is devoted to agriculture.[xxx]

There are two types of crops grown in the country –food crops and commercial crops. The former refers to rice, corn, vegetables, legumes, rootcrops, and fruits. On the

other hand, commercial crops refer to sugarcane, coconut, bananas, abaca, pineapple, tobacco, and other plantation crops grown not only for domesticconsumption but also for the export market. Rice and corn, the major food grain crops, constitute about 51% of the total cropped area. Almost all of the irrigated areas, estimated at 1.46 million hectares, are planted with rice.[xxxi]

B. ROLE OF AGRICULTURE IN PHILIPPINE ECONOMY

Agriculture is one of the most important sectors in Philippine economy. Such importance is reflected in its contribution to national wealth, employment, and export earnings. In terms of contribution to the Gross Domestic Product, it contributes 15% thereto, exceeded only by "Services" (54%) and "Industry" (31%).[xxxii] However, in terms of employment, the agricultural industry is the number one employer, tapping the services of 39.8% of the labor force, with a great difference over other sectors: "Government and Social Services" – 19.4%; "Services" – 17.7%; "Manufacturing" – 9.8%; "Construction" – 5.8%, and "Others" – 7.5%. [xxxiii]This is not to mention the fact that with respect to the manufacturing sector, a majority of the workforce thereat is involved in the processing of agricultural products.[xxxiv]

C. AGRICULTURE AND DEVELOPMENT

The economic history of the now developed countries would show that their industrialization was preceded by massive changes in the agricultural sector. The Industrial Revolution that transpired in the developed countries was propelled to fruition as a result of surplus-generating advancement in the agricultural sector. Such surplus was

instrumental in laying the foundation for a capital-driven economy with all the benefits resulting from economies of scale.[xxxv]

As earlier discussed, whether such model for economic development would still hold true in the case of developing countries is debatable, and has adherents holding opposing views. Whichever view is correct, there could be no question on the importance of agricultural development in developing countries in general, and to the Philippines, in particular.

D. DISTURBING TRENDS IN PHILIPPINE AGRICULTURE

It may be argued that much of the cause for worry in the agricultural sector is an offshoot of the country's slackening economic growth. In 1998, the Philippine economy showed signs of distress as a result of the spillover from the Asian financial crisis, and other domestic problems.[xxxvi] Growth fell to 0.6 % in 1998 from 5% in 1997 although it recovered to about 3.4% in 1999, 4% in 2000, and 3.4% in 2001.[xxxvii] In 2002, it recorded a GDP growth of about 4.6% but such fact is off-balanced by public sector debt equal to more than 100% of GDP.[xxxviii]

There are however other very disturbing trends.

The Philippines is one of the venues of the Green Revolution, a campaign to increase agricultural productivity through the introduction of packages of uniform technologies – fertilizer, high-yielding seeds, pesticides, mechanization, irrigation, credit and marketing schemes.[xxxix] There is however a view that the Green Revolution is nothing but a façade to bring much of Asia within the grips of the world trade system by forcing them to be dependent on technologies provided by developed countries. [xl] Thus,

although the Green Revolution did result in increased rice grain yields in some irrigated areas, it also resulted to concommitant environmental, health , and economic problems for both farmers and consumers.[xli] Soil and fertility yields are declining while pesticide use has soared to astronomical proportions. There is also resulting physical displacement as due to declining productivity in some areas, communities are being pushed into the uplands to eke out a living on fragile ecosystems.[xlii]

Accordingly, most of these problems stem directly from the loss of biodiversity and farmer control over productive resources. A case in point is the outbreak of the brown planthopper, a devastating pest in rice fields.[xliii] It appears that the rise of this disease-carrier corresponds almost exactly with the widespread cultivation and propagati on of several high-yielding varieties such as IR-8 in most countries of Asia, which are supposed to be cultivated to increase productivity. [xliv]It also appears that in any event, the outbreak of such pests provided the pesticide and chemical industry in developed countries a ready market for their products.

There is also a disturbing concern on biotechnology. More multinational corporations are investing in biotechnology research on rice n anticipation of profit. Genetic engineering is now focusing on inserting new traits in crops. By way of illustration, several companies are racing to develop or improving such rice varieties as “herbicide tolerant rice”, “Bt rice” (a rice which produces its own pesticide), and “hybrid rice” with “terminator technology”, involving a gene that prevents seeds from germinating.[xlv]

All the aforementioned research trends are hotly contested by proponents of sustainable agriculture because, contrary to propaganda, they will increase farmers’

dependency on chemicals and other external inputs, cause new health problems and further disrupt the ecological balance.[xlvi]

IV. Intellectual Property Protection in Philippine Agriculture

Intellectual property protection may be shown by the existence of laws that aim to protect intellectual property rights as well as through that of a government body or bodies that enforce such laws.

A. LAWS PROTECTING INTELLECTUAL PROPERTY

1. Philippine Constitution

Foremost of such laws is the Constitution of the Republic of the Philippines[xlvii], the highest law of the land. Section 13 of Article IV ("Education, Science, Technology, Arts, Culture, and Sports") provides:

> *"Sec. 13. The State shall protect and secure the exclusive rights of scientists, inventors, artists, and other gifted citizens to their intellectual property and creations, particularly when beneficial to the people, for such period as may be provided by law."*

A similar constitutional intent to promote science and technology in general is apparent in Section 17 of Article II ("Declaration of Principles and State Policies") which provides:

> *"Sec. 17. The State shall give priority to education, science and technology, arts, culture, and sports to foster patriotism and nationalism, accelerate social progress, and promote human liberation and development."*[xlviii]

2. Treaties

The Philippines is also a signatory to a number of treaties protecting intellectual property rights. The most significant of them is the Trade-Related Aspects of Intellectual Property Rights ("TRIPS") which took effect on January 1, 1985.[xlix] TRIPS is a comprehensive body of law which sets out compulsory minimum standards for intellectual property protection throughout the world.[l]

With respect to agriculture, the relevant portions of said treaty are those relating to geographical indications for wines and spirits (Section 3) and for patents (Section 5). Since the Philippines has no known established industry that would be interested in pushing for geographical indications in wines and spirits, the most relevant provision of the TRIPS is that concerning patents. The minimum standard on patents is thus, set forth in Article 27 of said Section 5 which states:

"Article 27

Patentable Subject Matter

1. *Subject to the provisions of paragraps 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application xxx*
2. *Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect ordre public or morality, including to protect human, animal, or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law.*

3. Members may also exclude from patentability:

(a) diagnostic, therapeutic and surgical methods for the treatment of humans or animals;

(b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective sui generi system or by any combination thereof. xxx"

Other treaties which are effective in the Philippines are the Paris Convention for the Protection of Industrial Property[li] (which has been in effect since 1965), the Budapest Treaty in the International Recognition of the Deposit of Microorganisms for Purposes of Patent Procedure[lii] (in effect since 1981), and the Patent Cooperation Treaty[liii] which was ratified by the Philippine Senate on February 5, 2001. The Paris Convention grants further protection on intellectual property in general. The Budapest Treaty establishes rules for the deposit of microorganisms for purposes of patent procedure. The Patent Cooperation Treaty constitutes the contracting parties into a union for cooperation in the filing, searching, and examination of applications for the protection of inventions, and rendering special technical services.

3. Special Laws

The most significant intellectual property law in the Philippines is the Intellectual Property Code[liv] (Republic Act No. 8293). It codified Philippine laws on intellectual property and repealed several other laws such as Republic Act No. 165 (“Patents Law”), Republic Act No. 166 (“Trademark Law”), Presidential Decree No. 49 (“Copyright

Law") and Presidential Decree No. 285 ("Textbook Re-printing Law"), among others.[lv] It was also enacted with the purpose of complying with the obligations of the Philippines under the TRIPS. It is thus, no wonder that the provisions of the Intellectual Property Code on patents are very much identical with the TRIPS provision which was quoted earlier.

Recently, the Philippine legislature enacted its own plant variety protection act, also by way of compliance of its TRIPS' obligation to come up with a *sui generis* regime of protection for plant varieties. The law is Republic Act No. 9168 entitled "An Act To Provide Protection To New Plant Varieties, Establishing a National Plant Variety Protection Board, and For Other Purposes" otherwise known as the "Philippine Plant Variety Protection Act of 2002".[lvi] It provides for the issuance of "certificates of plant variety protection" to breeders of plant varieties which are new, distinct, uniform, and stable.

4. Other Related Laws and Treaties

There are also other laws which although not directly related to intellectual property rights in agriculture affect agricultural development.

One such law is Republic Act No. 8371, otherwise known as the "Indigenous People's Rights Act"[lvii] which recognizes the rights of ancestral communities to their ancestral domains.

Then, there are the special laws calling for environmental conservation. Some of these are Republic Act No. 9147 ("Wildlife Resources Conservation and Protection Act"), Presidential Decree No. 1151 ("Philippine Environmental Policy"), and Executive Order

No. 430 and Administrative Order No. 8, s. of 2002 of the Department of Agriculture ("Rules and Regulations for the Importation and Release to the Environment of Plant Products Derived From the Use of Biotechnology")

There is also the Convention on Biological Diversity[lviii], a treaty calling for sustainable development in the utilization of natural resources, which the Philippines signed on December 6, 1992.

B. THE INTELLECTUAL PROPERTY OFFICE

The Intellectual Property Office (IPO) is the government body tasked with the mandate of administering and implementing the Republic Act No. 8293, the "Intellectual Property Code". It assumes the functions of granting and protecting intellectual property rights via its myriad functions which include the examination of applications for grants of letters patents for inventions, registration of utility models, industrial designs, integrated circuits, and technology transfer arrangements; hearing and deciding certain intellectual property cases; holding opposition and cancellation hearings; and the acceptance of "international applications" pursuant to the Patent Cooperation Treaty.

The IPO is also tasked with the implementing of the changes introduced by the Intellectual Property Code. These include the streamlining of the procedure in registering trademarks via the abolition of the Supplemental Register, overhauling the patent system from the "first-to-invent " to "first-to-file" system, and liberalization of registration of technology transfer arrangements which now provide for voluntary licensing.[lix]

V. The Report's Applicability to Philippine Agriculture

Generally, the findings in the Report are applicable to Philippine agriculture.

First, based on available evidence to date, there is inconclusive data relating the granting of intellectual property protection to an increase in research and inventions. For instance, since the country's ratification of the TRIPS in 1998, there occurred no significant change in the number of patent applications received by the Intellectual Property Office. For 1998, the IPO received 4802 applications compared to 4,775 in 1999; 5027 in 2000; and 3,753 in 2001.[lx]

As for the impact of plant variety protection, the relative newness of the Philippine Plant Variety Protection Act of 2002 obviates the possibility of gathering conclusive data on the impact of grants of certificates of plant variety protection.

However, as to increase in research due to increase intellectual property protection, the presence of the International Rice Research Institute (IRRI) in the Philippines may have complicated things. IRRI is a non-profit agricultural research and training center funded through the Consultative Group on International Agricultural Research (CGIAR) which operates from the World Bank. It is established supposedly to improve the well-being of present and future generations of rice farmers and consumers.[lxi] Since its establishment in 1960, it has been one of the world's prime research centers in rice research, and was in fact very successful in developing new strains of rice that respond well to chemical inputs like fertilizer and pesticides. Whether such successes in decades of "fruitful research" inure to the benefit of the Philippine

economy is another matter. This raises the issue of what kind of research IRRI produces and for whom it is beneficial.

The Report's admonition to increase public funding of research should of course be a welcome one to Philippine policy-makers. Basing however from the IRRI experience, the Philippine government should see to it that public sector research is devoted to search for alternatives that would ultimately benefit the Filipino people.

In relation to the Report's suggestion on biotechnology-related industries that developing countries wish to develop, that area should be one of the major focus of public sector research. That would aid policy and law-makers in formulating the appropriate type of intellectual property protection, if necessary.

The second conclusion deducible from the Report – that intellectual property protection has consequences inimical to development – may be gauged by the burgeoning of opposition to the TRIPS coming from farmers' groups. These groups believe that the TRIPS go against sustainable agriculture and that "a patent on seeds is a patent on freedom" and that "if you have to pay for patented seeds, it's like being forced to purchase your own freedom." By way of illustration, one of such organizations, MASIPAG, articulates that the TRIPS will "curtail the free exchange of seeds which is essential to farmers' livelihoods, especially in a sustainable agriculture program, establish a punishing royalty regime, give excessive monopoly rights to transnational companies, transfer the direct control of farm activities to the lords of trade and industry, commoditize the country's once equitably-shared local farm knowledge and resources, further sowing greed among farmers and farm communities, undermine community rights or the valued sense of communal ownership that is still prevalent today in many if not all

farming areas of the Philippines, and put a premium on food "re-production" conducted by transnational firms through genetic engineering, which further marginalizes and disempowers farmers in the local and national food production process."[lxii]

The third conclusion deducible from the Report – that for intellectual property protection to serve a country's developmental objectives, it should be "suited to the local palate" is discussed below.

VI. Further Recommendations on Legal and Policy Approaches to Intellectual Property Protection

This note suggests two general approaches so that intellectual property protection could best serve Philippine developmental objectives. One is reducing compliance with the TRIPS to the barest minimum possible. Another is the formulation and implementation of laws and policies that would strengthen farmers' rights.

The idea of "compliance to the barest minimum possible" is borne out of the fact that TRIPS is a given, the Philippines having agreed to it, and thus, any discussion as to its deleterious effects to the Philippine economy is now very academic. It is also floated considering that the challenge to policy-makers today is to come out with approaches to meeting such minimum in a manner, given the limitation that TRIPS brings, that would maximize Philippine developmental objectives.

A. ON PLANTS AND ANIMALS

In this regard, it is best for the Philippines not to come out with any law that would provide protection for plants and animals. In the same manner, it should guard against "indirect ways" of flouting such prohibition.

The Patent Cooperation Treaty which the Philippines acceded to should not be used for such indirect ways. Although signatories to such treaty constitute a union for cooperation in the filing, searching, and examination of applications for protection of inventions, such cooperation should not be used as an excuse to circumvent national prohibitions on non-patentability of plants and animals. Such a circumvention may be made possible by the fact that some countries grant patents to plants and animals. Article 27 , Sections 5 and 6 of said treaty should always be observed. It provides:

> *"(5) Nothing in this Treaty and the Regulations is intended to be construed as prescribing anything that would limit the freedom of each Contracting State to prescribe such substantive conditions of patentability as it desires. In particular, any provision in this Treaty and the regulations concerning the definition of prior art is exclusively for the purposes of international procedure and consequently, any Contracting State is free to apply, when determining the patentability of an invention claimed in an international application, the criteria of its national law in respect of prior art, and other conditions of patentability not constituting requirements as to the form and contents of applications.*
>
> *(6) The national law may require that the applicant furnish evidence in respect of any substantive conditions of patentability prescribed by such law."*

B. ON MICRO-ORGANISMS

Consistent with this approach, the Philippine patent law should adopt a very restrictive definition of "microorganism". After all, the TRIPS does not define it, and

apparently, it could be argued that its definition is left to the discretion of member-countries.

A restrictive definition should likewise be used in interpreting the "Budapest Treaty in the International Recognition of the Deposit of Microorganisms for Purposes of Patent Procedure". It is notable that although the said treaty calls for international cooperation with respect to the deposit of microorganisms for purposes of patent procedure, it does not contain a definition of "microorganism".

C. ON BREEDERS' RIGHTS

With respect to plant variety protection, the 2002 Plant Variety Protection Act of 2002 grants plant breeders certificates of plant variety protection for new, distinct, uniform, and stable varieties. It confers upon them the right to authorize production or reproduction, conditioning for purposes of propagation, offering for sale, selling, marketing, exporting, importing, and stocking for any of the above-mentioned purposes" (Section 36, Republic Act 9168).

There is no issue that it definitely complies with the Philippine obligation under the TRIPS for plant variety protection. There is an issue however as to whether it is consistent with a "barest minimum possible" approach. This may be raised in relation to Section 23 of said Act which provides:

> "*Section 23. National Treatment – Any application for certificate of plant variety protection previously granted to a breeder in another country, which by treaty, convention, or law affords similar privileges to Filipino citizens, shall be issued a Certificate of Plant Variety Protection, upon payment of dues and compliance to all provisions of the Act."*

The danger in such a provision is that it would result to the unconditional recognition of breeder's rights granted in other countries in the Philippines, which of course has different standards for said grants.

This Note strongly advocates the amendment of said Section 23 to include a proviso to the effect that the grant of similar privileges to citizens of other countries be made contingent on compliance with national substantive standards on plant variety protection. Corollarily, policy-makers should be quick to formulate those substantive standards which shall be used for such purpose.

E. FARMERS' RIGHTS

It is likewise proposed that there should be a legislation strengthening farmers' rights. While this may not necessarily involve intellectual property protection, such a move would be consistent with promoting sustainable development.

The Philippine government should seriously consider ratifying the International Treaty on Plant Genetic Resources[lxiii] as the multilateral system that it provides would augur well for the protection of traditional knowledge relevant to plant genetic resources for food and agriculture.[lxiv]

On the national level, this Note proposes the adoption of a law that would codify farmers' rights and which would guarantee them the right to equitably share in benefits arising from the utilization of plant genetic resources, as well as the right to participate in making decisions related to the conservation and sustainable use of plant genetic resources for food and agriculture.

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[i] This paper was submitted by the author as partial fulfillment of the requirements in the Intellectual Property Seminar class of Prof. Madhavi Sunder, Cornell Law Visiting Professor, Fall 2003.

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[iii] A leading growth theory in the area of developmental economics is the Solow model, formulated by Robert Solow. In his model, Solow argues that there are three factors of production –labor, capital, and technical progress, the last one acting as an "enlarger" of the two others. Thus, he postulates that developing countries should expand their technological bases to attain industrial growth. See Robert Solow, *A Contribution To The Theory of Economic Growth*, 70 Q.J. Econ. 65,66(1956).

[iv]This argument is consistent with the doctrine of "uneven development" which holds that the developed countries became wealthy at the expense of the developing countries because the developed countries were first to industrialize and have not given developing countries a chance to advance. See Paul Krugman, International Finance and Economic Development, in Finance and Development: Issues and Experience 15 (A. Giovanni ed., 1993)

[v]*Integrating Intellectual Property Rights and Development Policy*, Commission of Intellectual Property Rights, London, September 2002; Hereinafter, the said Commission will be referred to as the "Commission" and its Report as the "Report".

[vi] See "Preface" and "Foreword" of the Report.

[vii] The members of the Commission are Prof. John Barton (Chairman), George Osborne Professor of Law at Stanford University; Mr. Daniel Alexander, Barrister specializing in Intellectual Property Law, London, UK; Prof. Carlos Correa, Director of the Masters Programme on Science and Technology Policy and Management at the University of Buenos Aires, Argentina; Dr. Ramesh Mashelkar FRS, Director General of the Indian Council of Scientific and Industrial Research and Secretary to the Department of Scientific and Industrial Research, New Delhi, India; Dr. Gill Samuels CBE, Senior Director of Science Policy and Scientific Affairs at Pfizer Ltd., Sandwich , UK; and Dr. Sandy Thomas, Director of Nuffield Council on Bioethics, London, UK; See back of the front cover of the Report.

[viii]See Preface of the Report.

[ix] Ibid.

[x] The discussion in this heading is based primarily on Chapter 3 of the Report entitled "Agriculture and Genetic Resources", pp. 57 –69.

[xi] Report, pp. 60-61.

[xii] Report, pp. 67-68.

[xiii] Report, see the Foreword

[xiv] ibid, p. 60

[xv] ibid, p.64

[xvi]ibid, p. 61.

[xvii]Ibid.

[xviii] ibid.

[xix] ibid., p. 63.

[xx] Ibid., p.64; citing Barton, J. & Berger, P. (2001) "Patenting Agriculture", *Issues in Science and Technology*, Summer 2001, p. 4.

[xxi]Ibid., p.65.

[xxii]ibid; citing http://www.sygenta.com/en/media/printer.asp?article_id =234

[xxiii]ibid, p.67.

[xxiv] ibid.

[xxv] ibid., p. 66

[xxvi] ibid.

[xxvii]ibid., p. 69

[xxviii] ibid.

[xxix] "The Philippines" at http://www.gov..ph (This is the official government website of the Republic of the Philippines)

[xxx]*"The World Factbook"* in http://www.odci.gov/cia/publications/factbook/geos/rp.html#econ

[xxxi] Arboleda, Gregorio Jr., *"General Description of the Fertilizer Sector"* (October 13, 1998) at http://www.gov.ph

[xxxii] *"The World Factbook", supra.*

[xxxiii]*The World Factbook", supra.*

[xxxiv] Arboleda, supra.

[xxxv] See Mitchell A. Seligson, "The Dual Gaps: An Overview of Theory and Research", in The Gap Between Rich and Poor: Contending Perspectives on the Political Economy of Development 3 (Mitchell Seligson ed., 1984).

[xxxvi]The World Factbook, supra.

[xxxvii] Ibid.

[xxxviii] Ibid.

[xxxix] *"Developments in the Asian Rice Economy"*, edited by M. Sombilla, M. Hossain, and B. Hardy at http://www.irri.org/science/abstracts/021.asp

[xl] *"Biopiracy, TRIPS, and the patenting of Asia's Rice Bowl: A Collective NGO Situationer on IPRs on Rice" at http://www.grain.org/publications/rice-en.cfm*
[xli] ibid.

[xlii] ibid.

[xliii] ibid.

[xliv] ibid.

[xlv] ibid.

[xlvi] ibid.
[xlvii] 1987 Constitution (Republic of the Philipines), Section 13, Art. IV.

[xlviii]Ibid., Section 17, Art. II
[xlix] *Agreement on Trade-Related Aspects of Intellectual Property Rights"* at http://www.wto.org/english/docs e/legal/27-trips.pdf

[l]*"IP and the TRIPS Agreement"* at http://www.wto.org/english/tratop-etrips-etrips.e.htm

[li] Paris Convention for the Protection of Industrial Property, 1965 at http://www.wipo.int

[lii] Budapest Treaty in the International Recognition of the Deposit of Microorganisms for Purposes of Patent Procedure, 1981 at http://www.wipo.int

[liii] Patent Cooperation Treaty at http://www.wipo.int

[liv] Intellectual Property Code, January 1, 1998 at http://www.ipophilippines.gov.ph

[lv] See http://www.ipophilippines.gov.ph/aboutus.asp?id=1

[lvi] Philippine Plant Variety Protection Act of 2002 at http://www.chanrobles.com/index.htm

[lvii] Indigenous People's Rights Act (RA 8371) at http://www.chanrobles.com/index.htm

[lviii] Convention on Biological Diversity at http://www.fao.org/ag/cgrfa/itpgr.htm

[lix] See IPO website at http://www.ipophilippines.gov.ph

[lx] ibid.
[lxi] See description of IRRI at "Tanikalang Ginto" at http://www.filipinolinks.com/agriculture/index.html

[lxii] *Biopiracy, TRIPS, and The Patenting of Asia's Rice Bowl", supra.*

[lxiii] The Philippines is not yet a signatory to the ITPGRFA. As of today, there are already 32 instruments of ratification, acceptance, approval, or accession. The treaty will come into force 90 days after at least 40 governments have ratified it.

[lxiv] The so-called "Farmers' Rights" in the ITPGRFA are set forth in Article 9 of said treaty. It provides:

> "9.1 The Contracting Parties recognize the enormous contribution that the local and indigenous communities and farmers of all regions of the world, particularly those in the centers of origin and crop diversity, have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agricultural production throughout the world.
>
> 9.2 The Contracting Parties agree that the Responsibility for realizing Farmers' Rights, as they relate to plant genetic resources for food and agriculture, rests with national governments. In accordance with their needs and priorities, each Contracting Party should, as appropriate, and subject to its national legislation, take measures to protect and promote Farmers' Rights including:
>
> (a) protection of traditional knowledge relevant to plant genetic resources for food and agriculture;
> (b) the right to equitably participate in sharing benefits arising from the utilization of plant genetic resources for food and agriculture; and
> (c) the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture.
>
> 9.3 Nothing in this Article shall be interpreted to limit any rights that farmers have to save, use, exchange and sell farm-saved seed/propagating material, subject to national law and as appropriate."